

**FINDINGS AND RECOMMENDATIONS OF THE
ZONING BOARD OF APPEALS FROM THE
AUGUST 18, 2010 PUBLIC HEARING**

RE: Text Amendment - Section 5-3-13

WHEREAS, the Zoning Board of Appeals (“ZBA”) for the Village of Barrington Hills, Illinois (the “Village”) held a public hearing on August 18, 2010 to discuss the proposal of the Village Plan Commission to add a new Section 5-3-13 to the Village Zoning Ordinance with respect to regulations and guidelines for exterior lighting within the Village; and

WHEREAS, the Village currently regulates exterior lighting as a nuisance under Section 7-1-5 of the Village Code; and

WHEREAS, the Village Board directed the Plan Commission to propose a draft ordinance to further regulate exterior lighting for the purpose of providing lighting standards and practices that minimize light pollution, glare and light trespass and further to provide regulations that protect the health and welfare of Village residents; and

WHEREAS, the ZBA finds it to be in the best interests of the Village to amend the Zoning Ordinance with respect to exterior lighting regulations and guidelines and therefore, pursuant to Section 5-10-6(G) of the Zoning Ordinance, the ZBA submits to the Village Board of Trustees the following findings and recommendations regarding adding a new Section 5-3-13 to the Zoning Ordinance.

NOW THEREFORE, the ZBA makes the following findings and recommendations pursuant to the August 18, 2010 public hearing:

1. Following discussion by the ZBA at the public hearing on August 18, 2010, the ZBA recommends to the Village Board that it pass an ordinance to amend Title 5, Chapter 3 by adding the following Section 5-3-13, to read as follows:

5-3-13: EXTERIOR LIGHTING REGULATIONS:

(A) PURPOSE:

The purpose of this Section is to provide lighting standards and practices which will minimize Light Pollution and will conserve energy and resources while maintaining nighttime health, safety, utility and security. It is also intended for this Section to provide regulations which will protect the health and welfare of the general public and protect the ecological and natural resources of the Village, while preserving the ability to view the celestial features of the night sky for present and future generations.

Village authorities recognize:

- The need to safeguard the rural character, aesthetic value and the unique quality of life that Village residents enjoy by preserving and enhancing the ability to view the night sky.
- The night sky as a natural resource.
- The need to define limits and protect residents from the trespass of excessive and misdirected light from adjacent properties.
- That proper direction and use of light minimizes the use of energy.
- That excessive illumination ~~can~~ may have a detrimental effect on wildlife that depends on the natural cycle of the day and night for survival.
- The importance to all of astronomical observations and the enjoyment of the night sky.

(B) DEFINITIONS:

Terms used in this Section shall be defined as follows:

BACK SIDE SHIELD -- A device which is added or attached to a light fixture made from an opaque material which prevents light from being emitted in certain directions. Commonly applied to prevent light from entering an adjacent property.

DOORWAY -- Any means of ingress or egress to any structure, limited to doors and garage doors.

DOORWAY LIGHTING -- Light fixtures located within ~~five (5)~~ ten (10') feet of a doorway ~~and having a light output no greater than 1,800 lumens per doorway.~~

ESSENTIAL LIGHTING -- Light that is used for a specified period of time which is necessary for a specific task or purpose while said task or purpose is actively being performed.

EXCESSIVE LIGHTING -- Illuminance which exceeds the amount of light which is needed to perform a visual task or purpose at night.

EXTERIOR LIGHTING -- Temporary or permanent lighting that is installed, located or used in such a manner to cause light rays to shine outdoors. Fixtures which are located indoors, but which are intended to illuminate something outside are considered exterior lighting for the purposes of this Section.

FIXTURE, LIGHT FIXTURE (also called Luminaire) -- The complete lighting assembly (including the lamp(s), housing, ballasts, photocells, reflectors or refractors, lenses, sensors and shields) less the support assembly or pole, mounting bracket and base, consisting of one or more lamps together with the parts designed to distribute light,

position and protect the lamp, and connect the lamp to a source of power. Light fixtures are evaluated for safety by Underwriters Laboratory and are “rated” to certain wattage limits, as affixed by a UL issued label.

FOOTCANDLE -- A unit of measurement used to determine the amount of light incident on a surface, also known as “illuminance.” One foot-candle (1 fc) is equivalent to one lumen evenly distributed over one square foot of surface area at a distance of one foot. Foot-candle measurements can be taken with a hand-held light meter.

FULLY SHIELDED -- A light fixture or luminaire designed, constructed and installed in such a manner that all light emitted from the fixture, either directly from the lamp(s) or a diffusing element, or indirectly by reflection or refraction from any part of the fixture, is projected below the horizontal plane through the fixture’s lowest light emitting part.

GLARE -- A visual disturbance produced by a distinct light source within the visual field that is sufficiently brighter than the level to which the eyes are adapted.

HOLIDAY LIGHTING -- Temporary lighting installed in connection with a holiday or religious observance and removed thereafter.

ILLUMINANCE -- The amount of luminous flux falling onto a unit of surface area, correlating to the perception of brightness by the human eye. Illuminance is typically measured in lumens per square foot (foot-candles) or lumens per square meter (flux).

LAMP -- The source of light being emitted from a luminaire, such as a bulb.

LANDSCAPE LIGHTING -- Exterior lighting for the purpose of illuminating trees, shrubbery, plants, flower beds, waterways, gardens and non-structural, man-made features, including but not limited to, sculptures, fountains, trellises, statuary, tree houses and other features.

LIGHT LEVEL -- The illuminance as measured by a light meter as reported in photometry.

LIGHT OUTPUT -- The amount of light which is emitted by a lamp or fixture.

LIGHTING – Any or all parts of a luminaire that function to produce light or light produced by a man-made source, including but not limited to, electric lamps, gas lamps and solar lamps.

LIGHT POLLUTION -- Any unnecessary or adverse effect of artificial light including, but not limited to glare, light trespass, ~~Excessive or unnecessary~~ Lighting, up-lighting and Skyglow, and any artificial light that unnecessarily diminishes the ability to view the night sky or is disruptive to the natural environment.

LIGHT SOURCE or SOURCE -- The light emitting part or parts of a light fixture, consisting of the lamp or lamps and any transparent or translucent covering over the lamp, as well as any refractors, reflectors, prismatic lenses, mirrors, or diffusers which emit or transmit light.

LIGHT TRESPASS -- Light that falls on neighboring properties or produces glare or distraction for observers away from the area for which the light is intended.

LUMEN -- The unit of measurement used to quantify the amount of light produced by a lamp or emitted from a fixture (as distinct from “watt” which is a measurement of the electrical power).

LUMINAIRE -- See “FIXTURE”

LUMINOUS FLUX -- The power emitted from a source of electromagnetic radiation, such as a light bulb or light transmitting elements, in the form of visible light. Luminous flux is measured in lumens (flux) and is typically specified by the manufacturer for a given lamp or fixture. Typical luminous flux values for incandescent bulbs are 100W: 1550 lumens, 75W: 1080 lumens, 60W: 780 lumens and 40W: 450 lumens.

~~**MEASURED ACRE**—With respect to any real property located in the Village under single ownership and control, a portion thereof consisting of a single acre as measured by the Enforcing Officer comprised of either a circle, square or rectangle, provided, however, in the case of a rectangle, the measured sides shall not be more than 25% different in length and further provided, such acre shall be measured by the Enforcing Officer in such a manner as to provide flexibility to the owner to maximize the amount of permitted Lumens per measured acre on his or her property.~~

MOTION SENSOR -- A sensor which causes a luminaire to become illuminated automatically upon the presence of motion or infrared radiation or a combination thereof within its field of view.

MOUNTING HEIGHT -- The height above normal grade to the lowest light emitting part of an installed fixture.

NEW CONSTRUCTION -- The construction of a new principal building on a lot (as such terms are defined in Section 5-2-1) or the expansion of an existing principal building on a lot such that the resulting floor area (as defined in Section 5-2-1) of such principal building is increased by more than 50%.

NON-CONFORMING -- Lighting which does not meet the requirements and specifications contained herein.

NON-ESSENTIAL LIGHTING -- Lighting which is unnecessary for pedestrian passage and not generally useful (e.g., artistic, decorative or landscape lighting). This includes lighting intended for a specific task or purpose when said task or purpose is not being

actively performed (e.g., parking lot illumination and wall-mounted perimeter lights after business hours).

PHOTOMETRY -- A technical test report that indicates light distribution and performance of a fixture. A photometric plan may include candlepower distribution data, cutoff classification, foot-candle chart, etc., some of which are generally available directly from the manufacturer, and which may have been produced by an independent laboratory.

SEARCHLIGHT -- Lighting installation, either ground or vehicle mounted, designed to project a high-intensity beam of light that is typically used to sweep the sky for promotional purposes.

SECURITY LIGHTING -- Exterior Lighting installed primarily for personal safety or emergency purposes that is attached to a structure or used to illuminate a walk or driveway and is Fully Shielded. ~~extinguished, either automatically or manually, within thirty (30) minutes upon cessation of the actual or perceived emergency. Exterior Lighting that is not extinguished within 30 minutes upon cessation of the actual or perceived emergency is no longer considered to be security lighting.~~

SHIELD or SHIELDED -- When applied to lighting, an opaque barrier which does not allow light to be transmitted in certain directions.

SKYGLOW -- The brightening of the night sky or the overhead glow from artificial light that is directed upward or reflected off moisture and dust particles in the atmosphere, reducing the ability to view the natural night sky.

SPECIAL EVENT LIGHTING -- Lighting approved by the Village for use at a temporary special event.

SPORTS LIGHTING -- Light Fixtures used to illuminate courts, arenas, riding arenas, fields, tracks and other recreational areas generally utilizing high Light Output Fixtures, higher Light Levels and are mounted on higher than average free standing poles.

UL Rating -- A reference to “Underwriters Laboratory” (or other recognized testing laboratory), a commercial agency that certifies the maximum safe wattage for fixtures and other electrical devices. A UL Label indicating the maximum safe wattage is affixed or imprinted on all light fixtures which are offered for sale.

UNIFORMITY RATIO -- A ratio that describes uniformity of illuminance across an area.

UNSHIELDED -- The luminaire only incorporates clear glass, which permits all light to escape.

VILLAGE -- The Village of Barrington Hills.

(C) APPLICABILITY:

1. (a) Applicability. In all Residential Zoning Districts R-1 to R-4, inclusive, ~~All~~ Exterior Lighting installed or relocated, ~~replaced~~ with regard to any New Construction commenced after the effective date of this Section shall conform to the provisions established by this Section, unless otherwise exempted herein.
- (b) In all other Zoning Districts, Exterior Lighting installed or relocated after the effective date of this Section shall conform to the provisions established by this Section, unless otherwise exempted herein.
2. ~~Pre-existing Lighting: Existing Exterior Lighting in conflict with this Section shall be classified as “Non-Conforming”. Non-Conforming lighting shall be governed by Subsection G of this Section and shall not continue unless it is brought into compliance with the requirements of Subsection G of this Section.~~
3. Conflict with other laws. ~~In the case where this Section is found to be in conflict with another provision of local law, the provision or requirement which is the more restrictive, or which establishes the higher standard, shall prevail. Nothing in this Section 5-3-13 is intended to affect the continued applicability of the provisions of Section 5-2-1 (definition of Polo Field), Section 5-3-12, Section 5-5-12(G)4, Section 5-6-10(E)4, Section 5-6-12, Section 5-7-18, Section 6-4-3(G) and Section 7-1-5 of the Village Code and such Sections shall continue to apply in those instances that this Section 5-3-13 does not apply. In the event of any conflict between this Section 5-13-13 and any other provision of the Village Code, to the extent this Section 5-13-13 applies, it shall control.~~
4. Exempt Lighting. The following are exempt from the provisions of this Section:
 - (a) Security Lighting.
 - (b) Doorway Lighting within residential zoning districts R1-R4.
 - (c) All temporary emergency Lighting necessary to ensure public safety as specified by the Chief of Police, Chief Fire Marshal or other firefighting or emergency service providers.
 - (d) Lighting used in the undertaking of municipal road construction, emergency repair or maintenance of utility lines, sewer, water mains or similar public infrastructure.
 - (e) Holiday Lighting between October 20th and January 31st of the following year.
 - (f) Upward Lighting of flags in the form of a single ground-mounted, narrow cone spotlight located at the base of the flag pole which confines the illumination to the flag itself.

- (g) Underwater Lighting used for swimming pools, provided such Lighting meets all relevant electrical codes.
- (h) Temporary lighting used in conjunction with occasional special events.
- (h) Lighting for radio, communication and navigation towers, provided that the owner or occupant demonstrates to the satisfaction of the Village that the Federal Aviation Administration (FAA) regulations can only be met through the use of Lighting that does not comply with this Section, and that the provisions of this Section are otherwise met to the fullest extent possible. Lighting for any wireless communications facility shall not be permitted unless required by the FAA; in which case, required Lighting shall be of the lowest allowed intensity, unless specifically forbidden by the FAA.
- (i) Temporary Exterior Lighting reviewed and approved in connection with a permit issued by the Village provided that the Lighting is extinguished and removed according to the permit.
- (j) Tennis courts, paddle courts, hockey and or skating rinks, horse arenas; provided such Lighting shall be extinguished by 11:00 p.m.
- (k) All Essential Lighting.

5. Prohibited Lighting. The following Lighting shall not be permitted within the Village, except if exempt above under Subsection (C)4:

- (a) Special Event Lighting which has not been approved and permitted by the Village.
- (b) Mobile or ground mounted Searchlights, except those used for governmental or emergency purposes.
- (c) Strobe lights and laser lights, including laser light shows and aerial laser lights.
- (d) Neon lights, except as legally permitted.
- (e) Blinking, flickering, scrolling, rotating, pulsating, tracing lights or revolving Lighting, including on signs.
- (f) Flashing lights unless temporarily triggered by a security system and extinguished within 30 minutes after the time of security response.
- (g) Lighting which is used to outline a building, structure, or window, including neon, fiber optic, light emitting diode (LED), or fluorescent tube Lighting which is used for this purpose.

- (h) Any Light Fixture that may be construed as or confused with a traffic signal, traffic control device or maritime navigational markers.
- (i) Lighting that is determined by the Village Police Department to contribute to a condition of disabling or distracting Glare into a public roadway.
- (j) Illuminated indoor signs visible from outdoors.
- (k) Lighting used to illuminate property other than that on which the Fixture is located and which constitutes Light Trespass.

(D) RESERVED.

(E) RESIDENTIAL LIGHTING STANDARDS:

The following residential lighting standards are established for residential zoning districts R1-R4, pursuant to the Village Code, provided, however, that such zoning districts for which a special use has been issued or is required shall be regulated pursuant to Subsection (F) hereof.

1. All Exterior Lighting shall not cause Glare and shall protect adjacent properties, roadways and waterways from Light Trespass and Excessive Lighting.
2. For all non-exempt Exterior Lighting, the maximum Light Output shall not exceed: ~~(a) 15,000 Lumens for the Measured Acre that contains within such Measured Acre 100% of the square footage of the principal single family detached dwelling located on the property, (b) 10,000 Lumens per any Measured Acre not inclusive of the principal single family detached dwelling, and (c) a total on any given property under single ownership and control equal to 10,000 Lumens multiplied by the total number of acres of such property.~~
3. Installation Restrictions.
 - (a) All Exterior Lighting Fixtures shall be Fully Shielded or aimed at such an angle so as to eliminate Glare from such Lighting Fixture, except as follows:
 - i. Landscape Lighting. Unshielded Landscape Lighting is permitted and is not required to be angled downward provided that the Light Source is not visible from adjoining properties (defined as seeing the heated element across property lines) and that each UL rated Fixture has a Light Output not in excess of 1600 Lumens.
 - ii. Driveway/Walkway/Identity Sign/Decorative Lighting. Unshielded Lighting at entryways, including driveways and walkways and Lighting for property identity signs, gates, fences, and post-top entrances is permitted and the Fixture is not required to be angled downward provided

that each UL rated Fixture has a Light Output not in excess of 1600 Lumens.

- iii. Unshielded House Wash lighting shall be permitted in an upward angle so that each UL fixture has a light output not to exceed 1600 lumens. House Wash lighting shall be extinguished by 11:00 PM.

(b) Height:

- i. The maximum Mounting Height of a Fixture on a structure shall not exceed the height of the eave of such structure.
- ii. Except for Sports Lighting permitted under Subsection (E)6 below, all freestanding Lighting, including, but not limited to, Landscape Lighting affixed, attached, installed, mounted or placed on exterior vegetation such as trees, shrubs and other flora, shall be angled downward so as to eliminate glare and shall not exceed a Mounting Height of ~~fifteen (15)~~ **eighteen (18)** feet. The setback for freestanding Light Fixtures from the property line shall be at least three times the Mounting Height, except there shall be no setback requirements for Lighting mounted on gates and fences, provided such Lighting does not exceed 0.1 foot-candles of Illuminance.

4. Hours of Operation. Landscape Lighting shall not be operated between the hours of 11:00 p.m. to dawn, provided, however, solar-powered Landscape Lighting that lacks an on/off switch may be operated between the hours of 11:00 p.m. to dawn, further provided that such solar-powered Landscape Lighting does not exceed 0.1 foot-candles of Illuminance, subject to Subsections (E)2 and (E)3 hereof.

5. Prohibited Light Fixtures. Mercury Vapor Light Fixtures **which are not Fully Shielded** are not permitted.

6. Sports Lighting. For Sports Lighting ~~where the nighttime activity is authorized by a permit,~~ the following shall apply:

- (a) Light Fixtures shall be Shielded as designed and installed.
- (b) Light Levels shall not exceed the appropriate Illuminating Engineering Society of North America (IESNA) recommended level of spectator/play for the activity.
- (c) Sports Lighting shall be set to automatically shut off when there is no scheduled play and shall be extinguished no later than 11:00 p.m. Lower Light Levels for off the field Lighting may be provided for an additional 30 minutes for safe egress.

(d) The Mounting Height for Sports Lighting shall be no greater than $\frac{1}{4}$ the distance to the property line from where the Sports Lighting is located and shall not exceed eighteen (18) feet.

(e) Sports Lighting Trespass shall not exceed at any point on the property line: 0.1 Foot-candles of Illuminance.

~~(f) Sports Lighting shall not be installed on residential properties which are less than five (5) acres.~~

(g) Designs for all Sports Lighting shall be submitted to the Village prior to installation to assure that the requirements of this Subsection (E)6 are satisfied.

(F) NON-RESIDENTIAL LIGHTING STANDARDS:

The following non-residential lighting standards are restricted to business zoning districts B1-B4, BP and LID, pursuant to the Village Code and for any properties within residential zoning districts R1-R4 for which a special use permit has been issued or is required.

1. All non-residential Exterior Lighting shall not cause Glare and shall protect adjacent properties, roadways and waterways from Light Trespass and Excessive Lighting.

2. As determined by photometric plans or as certified by the manufacturer, the maximum Lumen output ~~per any Measured Acre area~~ shall not exceed 50,000 Lumens per acre, with no more than 5,000 of those Lumens being unshielded.

3. Installation Restrictions.

(a) All Exterior Lighting Fixtures shall be Fully Shielded and aimed straight downward with the following exceptions:

- i. Doorways. Unshielded non-residential Light Fixtures located within ~~five (5)~~ **ten (10)** feet of a doorway are permitted on the primary structure provided that the Fixture(s) is UL listed and Lamped at no greater than 1800 Lumens per doorway, regardless of the number of Lamps.
- ii. Landscape Lighting. Unshielded Landscape Lighting is permitted provided that the Light Source is not visible (defined as seeing the heated element across property lines) and that the UL rated Fixture has a Light Output not in excess of ~~600~~ **1600** Lumens.

(b) Signs. Lamps used for illumination of such signs shall be included in the total Lumens per acre and shall be turned off at 11:00 p.m. or when the business closes, whichever is earlier.

(c) Height. The maximum Mounting Height of a Fixture, except for Fixtures in Subsection (F)9 below, shall not exceed ~~fifteen (15)~~ **eighteen (18)** feet.

4. Fixture Setback. The setback distance for freestanding Light Fixtures to the property line shall be no less than three times the Mounting Height unless it can be demonstrated on a lighting plan that with the use of a Back Side Shield, all Light Trespass limits are met, provided, however, there shall be no setback requirements for Lighting mounted on gates and fences, provided such lighting does not exceed 0.1 foot-candle of Illuminance.
5. Hours of Operation. All conforming and Non-Conforming Exterior Lighting shall be turned off within ½ hour after the close of business and no later than 11:00 p.m. Lights needed for safety or emergency purposes shall be controlled by timers or Motion Sensors.
6. Lamp Types. In an effort to foster sustainability, the Village encourages energy efficient Light Sources. High pressure sodium, fluorescent, low-pressure sodium Lamps or metal halide shall be used for all Light Fixtures UL rated to be lamped greater than 1,800 Lumens. Mercury vapor shall not be permitted.
7. Light Trespass Limits. Lighting plans submitted for approval shall comply with the following:
 - (a) The maximum Illuminance at or beyond the property line that adjoins a residential parcel, nature preserve or waterway may not exceed 0.1 foot-candles of Illuminance horizontal on the ground or 0.1 foot-candles if Illuminance vertical measured at a five foot height above the ground, unless otherwise permitted by applicable law.
 - (b) Maximum horizontal or vertical Illuminance allowed between adjacent commercial properties or public right-of-way shall be 0.1 foot-candle.
8. Parking Lot Illumination. All parking lot Fixtures shall be Fully Shielded and aimed straight downward.
9. Sports Lighting. For Sports Lighting where the nighttime activity is authorized by a permit, the following shall apply:
 - (a) Light Fixtures shall be Shielded as designed and installed.
 - (b) Light Levels shall not exceed the appropriate Illuminating Engineering Society of North America (IESNA) recommended level of spectator/play for the activity.
 - (c) Sports Lighting shall be set to automatically shut off when there is no scheduled play and shall be extinguished no later than 11:00 p.m. Lower Light Levels for off the field Lighting may be provided for an additional 30 minutes for safe egress.
 - (d) The Mounting Height for Sports Lighting shall be no greater than ¼ the distance to the property line from where the Sports Lighting is located and shall not exceed eighteen (18) feet.

- (e) Sports Lighting Trespass shall not exceed at any point on the property line: 0.1 Foot-candles of Illuminance.
- (f) Sports Lighting shall not be installed on properties which are less than five (5) acres.
- (g) Designs for all Sports Lighting shall be submitted to the Village prior to installation to assure that the requirements of this Subsection (F)9 are satisfied.

10. Special Use. The Village in granting a special use permit may establish additional regulations or waive the regulations set forth herein.

11. Approval. All non-residential Lighting shall be reviewed by the Plan Commission in accordance with Subsection (H) of this Section and approved by the Village Board.

(G) AMORTIZATION:

In order to provide consistency throughout the Village and carry out the requirements of this Section, the following sunset provisions shall be implemented with respect to phasing out pre-existing, Non-Conforming Lighting within business zoning districts B1-B4, BP and LID.

~~1. Residential. All Exterior Lighting installed after the effective date of this Section shall conform to all provisions of this Section. All non-conforming Exterior Lighting existing as of the effective date of this Section shall conform to the provisions of this Section as follows:~~

- ~~(a) Upon replacement or relocation of any Lighting Fixture, such Lighting Fixture shall conform to the provisions of this Section.~~
- ~~(b) Upon re-lamping (changing the light bulb), all replacement Lamps shall conform to the maximum Light Output limitations contained in the definition of Doorway Lighting and Subsections (E)3(a)(i) and (E)3(a)(ii) of this Section, as applicable, provided that the Fixture can accommodate a compliant Lamp.~~
- ~~(c) All Landscape Lighting shall conform to the time restrictions contained in Subsection (E)4 of this Section.~~
- ~~(d) On or before January 1, 2012, all Sports Lighting shall conform to the requirements contained in Subsections (E)6 and (F)9 of this Section.~~
- ~~(e) On or before January 1, 2016, all Exterior Lighting shall conform to the height and setback restrictions contained in Subsection (E)3(b) of this Section.~~
- ~~(f) On or before January 1, 2016, all Exterior Lighting shall conform to the prohibition on Mercury Vapor Light Fixtures contained in Subsection (E)5 of this Section.~~

~~(g) On or before January 1, 2031 all Exterior Lighting shall conform in all respects to the provisions of this Section, including, but not limited to, the maximum Lumens per Measured Acre restrictions contained in Subsection (E)2 of this Section.~~

~~2. Non Residential. All non residential Lighting shall conform to the provisions of this Section upon enactment except for the following:~~

- (a) All Lighting plans approved prior to the date of the effective date of this Section and installed in connection with a site plan, but not in compliance with this Section, shall be brought into compliance within Ten (10) years from the date of the Lighting plan approval, or in connection with a new development proposal, whichever comes first.
- (b) On or before January 1, 2012, all pre-existing Exterior Lighting, exclusive of permitted sign Lighting, shall be extinguished ½ hour after close of business exclusive of operational Motion Sensor activated Light Fixtures, provided such Lighting is not activated by activity off the property.
- (c) Mercury Vapor Light Fixtures shall be removed on or before January 1, 2012.
- (d) All other pre-existing, non-residential Lighting shall conform to the provisions of this Section by January 1, 2017.

(H) PROCEDURES:

1. Any applications for proposed or required non-residential Lighting plans submitted to the Plan Commission shall include Exterior Lighting plans, Fixture and Lighting control specifications, along with any additional documentation required by the Plan Commission in order to verify that the ~~preexisting or~~ proposed Exterior Lighting conforms to the provisions of this Section.
2. The following items shall accompany a Lighting plan submission for review and approval by the Plan Commission:
 - (a) A site plan complete with all existing and proposed structures, parking spaces, building entrances, traffic areas (both vehicular and pedestrian), vegetation that might interfere with Lighting, indicating with shading or highlighting, all areas where pedestrians shall be walking or where pedestrians may come in conflict with vehicles. The site plan shall show, by location, and identify each existing and proposed Fixture and shall specify its installed height, pole foundation details and mounting methods.
 - (b) A detailed Lighting plan when the total number for all exterior Light Fixtures on the property, exclusive of sign Lighting, exceeds 5,000 Lumens, indicating initial Illuminance levels as expressed in foot-candle measurements on a grid of the site showing foot-candle readings in every five foot square. The grid shall include the

location and installed height of each existing and proposed Fixture (i.e., pole mounted lights, wall mounted lights and Lighting, including street lights), and the overall Light Levels in foot-candles on the entire site. The grid shall extend at least 20 (twenty) feet beyond the site property lines, indicating the zoning of all adjacent properties to assure compliance with Light Trespass requirements. Photometric plans shall be prepared by the Fixture manufacturer or a licensed professional, architect or engineer and shall provide calculation of average maintained foot-candles, maximum and minimum foot-candle readings, and the average to minimum and the maximum to minimum Uniformity Ratios.

- (c) A description of each Light Fixture as depicted and identified on the site plan including the manufacturer, model number, a photograph of the Fixture and a manufacturer's catalog cut-sheet, detailed IES formatted Photometric data, a description of the cutoff characteristics of each Fixture, Light Output in initial Lumens and Lamp type, verifying any compliance requirements specified within this Section.
 - (d) Mounting Height indicated with distance to nearest property line for each proposed and existing Fixture, including pole foundation description.
 - (e) Shielding or Glare reduction devices and all mounting details.
 - (f) Types of timing devices or Motion Sensor devices used to control the Fixtures and a schedule of the proposed hours when each Fixture will be operated.
 - (g) Total exterior Lamp Lumens for all Fixtures on the property, calculated at initial Lumen Output.
 - (h) A summary key table identifying the maximum, minimum and average Light Levels in Foot-candles as well as Uniformity Ratios for all parking areas and walkways.
3. When considering a site plan application, the Plan Commission may require the use of motion Sensor devices to control Lighting for Illumination of a building entrance, recreation area, parking area, access ways or other such areas.
4. In non-residential zoning districts, when a site plan includes additions to or modifications of an existing Lighting system where the proposed changes will increase the Lighting on the site by more than twenty-five (25%) percent of the pre-existing Light Output, the Plan Commission may require that all or part of the pre-existing Lighting be changed to conform with the provisions of this Section.
4. Appropriate Exterior Lighting Levels may be influenced by the general nature of the surrounding environment, subject to Village approval.

5. No Exterior Lighting shall be installed, replaced, substituted, altered, changed, repaired, relocated, enlarged, moved, improved or converted unless it conforms to a Lighting plan approved by the Plan Commission. At its discretion, the Village may not require Foot-candle renderings when the Exterior Lighting for the entire site does not exceed 5,000 Lumens.

6. Where new installations have been designed by a licensed architect or Lighting engineer, he or she shall conduct a post-installation inspection to verify compliance with the approved plan. Such architect or engineer shall submit a certification to the Village, verifying that such inspection was performed and that the installed system operates and is in conformance with the approved plan prior to the issuance of a certificate of occupancy or other Village approval.

7. The Village shall have the right to conduct a post-installation inspection to verify compliance with the requirements of this Section and, if appropriate, to require remedial action at the expense of the applicant.

8. Guidelines will be made available to applicants to facilitate compliance.

(I) PENALTIES:

1. Non-Essential Lighting or Prohibited Lighting can be ordered by the Village Police Department or the Enforcing Officer to be extinguished, including mobile or ground mounted Searchlights, laser light shows, decorative flashing, blinking or tracing lights, exclusive of exempt Lighting, at any time.

2. It shall be unlawful for any person, firm, owner, tenant, person in possession, partnership, corporation or other business entity to install, alter, repair, move, equip, use or maintain or allow such installation of any Exterior Lighting in violation of any of the provisions of this Section, or to fail in any manner to comply with a notice, directive or order of the Village.

3. If, after investigation, the Enforcing Officer finds that any provision of this Section is being violated, notice shall be given by hand delivery or by certified mail, return receipt requested, of such violation to the owner and/or to the occupant of such premises, demanding that the violation be abated within thirty (30) days of the date of hand delivery or of the date of mailing of the notice. Applicable staff shall be available to assist in working with the violator to correct said Lighting violation. If the violation is not abated within the thirty (30) day period, the Enforcing Officer may institute actions and proceedings, either legal or equitable, to enjoin, restrain or abate any violations of this Section and to collect the penalties for such violations.

4. A violation of this Section, or any provision thereof, shall be punishable by a civil penalty of fifty (\$50) dollars for residential violations and one hundred fifty (\$150) for non-residential violations for each day of the violation after the expiration of the thirty (30) day period, and each day shall constitute a separate offense for the purpose of calculating the civil penalty.

2. The ZBA further finds that adding Section 5-3-13 as recommended herein is in the public interest and not solely for the benefit of a single applicant.

Dated this ____ day of _____, 2010

Jonathan Knight, Chairman

DRAFT